

ABSTRACT

The present invention provides a thin film transistor (TFT) and its production method which enable the stabilizing of saturation current and improving reliability by improving the film quality of the channel region. The TFT includes a channel region towering over a gate electrode through a gate insulation film, a source region connecting to the channel region and a drain region connecting to the channel region on an opposite side of the source region are formed on the polycrystal semiconductor film on which island-like patterning is performed.

An indented section is formed on a surface of the channel region, and the section corresponding to the indented section becomes a recombination center which captures the small-number carrier (holes) because the degree of the crystallization is low in the section corresponding to the indented section due to shift from the optimum conditions at the time of laser annealing of the semiconductor.